WHAT IS CLAIMED IS:

1. A system for identifying a channel, to be used in a time-division multiplexing transmission system in which a plurality of channels is time-division multiplexed for transmission, characterized in that

at least one of said channels stores asynchronous transfer mode (ATM) cell-base flow therein,

a transmitter includes a deformer which deforms a physical layer operation administration management cell (PLOAM cell) cyclically inserted into said ATM cell-base flow, into an inherent form,

said transmitter establishes a reference channel by means of said deformer,

a recipient includes a first detector which detects said physical layer operation administration management cell having been deformed into an inherent form,

said recipient identifies said reference channel by means of said first detector.

2. The system for identifying a channel, as set forth in claim 1, wherein

said transmitter includes a HEC byte inverter which inverts a HEC byte included in a header of said physical layer operation administration management cell,

said recipient includes a second detector which detects said physical layer operation administration management cell having the thus inverted

HEC byte, and

said recipient identifies said reference channel by means of said second detector.

3. The system for identifying a channel, as set forth in claim 1, wherein said channels are time-division multiplexed by every bit or byte.

4. A system in which a plurality of channels is time-division multiplexed for transmission, characterized in that

at least one of said channels stores asynchronous transfer mode (ATM) cell-base flow therein,

a transmitter includes a transmitter unit comprising:

a channel identifier applying circuit which deforms a physical layer operation administration management cell in a channel storing said ATM cell-base flow, into an inherent form to produce a reference channel signal; and

a multiplexing circuit which receives channel signals including said reference channel signal, time-division multiplexes the thus received channel signals, and transmits the thus multiplexed channel signals as multiplexed transmission signals,

a recipient includes a receiver unit comprising:

a separating circuit which time-division separates said multiplexed transmission signals transmitted from said transmitter unit; and

at least one reference channel detecting circuit which inputs one of a

plurality of channel signals transmitted from said separating circuit, and detects whether the thus input channel signal includes a physical layer operation administration management cell having been deformed into an inherent form, to thereby detect a reference channel.

5. The system as set forth in claim 4, wherein said channel identifier applying circuit includes:

a synchronizer for synchronizing with HEC of said physical layer operation administration management cell; and

an inverter for inverting HEC of said physical layer operation administration management cell.

6. The system as set forth in claim 4, wherein said reference channel detecting circuit includes:

a first unit which receives separated channels and carries out CRC operation;

an ATM cell synchronizer for synchronizing with ATM cell in accordance with results of the operation carried out by said CRC operating unit; and

a second unit which inverts HEC in said physical layer operation administration management cell and carries out CRC operation.

7. The system as set forth in claim 6, wherein said reference channel detecting circuit includes:

an inconsistency detecting circuit which receives results of the

operation carried out by said CRC operating unit and ATM cell synchronization signals transmitted from said ATM cell synchronizer, judges whether they are consistent with each other, and transmits an inconsistency detection signal when they are inconsistent with each other; and

a reference channel judging circuit which receives said inconsistency detection signal and results of the operation carried out by said second unit, and detects a reference channel.

9. The system as set forth in claim 4, wherein said receiver unit receives a reference channel detection signal transmitted from said reference channel detecting circuit, and identifies other channels on the basis of a phase of the reference channel, and wherein said receiver unit includes a switch which switches a connection in accordance with results of identification of said other channels.

10. The system as set forth in claim 5, wherein said inverter inverts a part of HEC of said physical layer operation administration management cell.

11. The system as set forth in claim 10, wherein said inverter inverts different parts of HEC from one another in the reference channel signals.

12. The system as set forth in claim 4, wherein said channels are time-division multiplexed by every bit or byte.

13. A method of identifying a channel, to be used in a time-division multiplexing transmission system in which a plurality of channels is time-division multiplexed for transmission,

at least one of said channels storing asynchronous transfer mode (ATM) cell-base flow therein,

said method including the steps of:

deforming a physical layer operation administration management cell (PLOAM cell) cyclically inserted into said ATM cell-base flow, into an inherent form to thereby establish a reference channel, said deforming being carried out by a transmitter;

detecting said physical layer operation administration management cell having been deformed into an inherent form, to thereby identify said reference channel, said detecting being carried out by a recipient.

14. The method as set forth in claim 13, further comprising the steps of:

inverting a HEC byte included in a header of said physical layer operation administration management cell, said inverting being carried out by said transmitter; and

detecting said physical layer operation administration management cell having the thus inverted HEC byte, to thereby identify said reference channel, said detecting being carried out by said recipient.

15. The method as set forth in claim 13, wherein said channels are

time-division multiplexed by every bit or byte.

16. A method of time-division multiplexing a plurality of channels for transmission,

at least one of said channels storing asynchronous transfer mode (ATM) cell-base flow therein,

said method including:

the first step of deforming a physical layer operation administration management cell in a channel storing said ATM cell-base flow, into an inherent form to produce a reference channel signal, said first step being carried out by a transmitter;

the second step of receiving channel signals including said reference channel signal, time-division multiplexing the thus received channel signals, and transmitting the thus multiplexed channel signals as multiplexed transmission signals;

the third step of time-division separating said time-division multiplexed transmission signals, said third step being carried out by a recipient; and

the fourth step of inputting one of a plurality of channel signals transmitted in said third step, and judging whether the thus input channel signal includes said physical layer operation administration management cell having been deformed into an inherent form, to thereby detect a reference channel.

17. The method as set forth in claim 16, wherein said first step

includes:

synchronizing with HEC of said physical layer operation administration management cell; and

inverting HEC of said physical layer operation administration management cell.

18. The method as set forth in claim 16, wherein said fourth step includes:

receiving separated channels and carrying out CRC operation;

synchronizing with ATM cell in accordance with results of said CRC operation; and

inverting HEC in said physical layer operation administration management cell and carrying out CRC operation.

19. The method as set forth in claim 18, wherein said fourth step includes:

judging whether the results of said CRC operation are inconsistent with the results of the step of synchronizing with ATM cell; and

detecting a reference channel, based on the results of said judging step and the results of said CRC operation.

20. The method as set forth in claim 19, further comprising the step of transmitting a bit-rotation signal when said reference channel is not detected for a certain period of time.

21. The method as set forth in clam 16, further comprising the step of identifying other channels on the basis of a phase of said reference channel, and switching a connection in accordance with the results of identification of said other channels.

22. The method as set forth in claim 17, wherein a part of HEC of said physical layer operation administration management cell is inverted in the step of inverting HEC of said physical layer operation administration management cell.

23. The method as set forth in claim 22, wherein different parts of HEC from one another are inverted in the reference channel signals.

24. The method as set forth in claim 24, wherein said channels are time-division multiplexed by every bit or byte.

25. A system for identifying a channel, to be used in a time-division multiplexing transmission system in which a plurality of channels is time-division multiplexed for transmission,

characterized in that at least one of said channels stores asynchronous transfer mode (ATM) cell-base flow therein, and

characterized by

a transmitter unit comprising:

a channel identifier adder which is formed in a cell header of a channel storing said ATM cell-base flow, and which deforms a HEC byte indicative of data used for detecting and correcting an error in transmitted data, into an inherent form to thereby produce a reference channel signal; and

a multiplexer which time-division multiplexes channel signals including said reference channel signal, and transmits the thus multiplexed channel signals as time-division multiplexed signals, and

a receiver unit comprising:

at least one separator which time-division separates said time-division multiplexed signals; and

at least one reference channel detector which detects a reference channel signal including said HEC byte, among a plurality of channel signals produced by said separator.

26. The system as set forth in claim 25, wherein said channel identifier adder includes:

a synchronizer which synchronizes said channel signals with one another, based on said HEC byte; and

a modulo 2 adder which modulo-2 adds an inherent bit pattern to said HEC byte.

27. The system as set forth in claim 26, wherein said reference channel detector includes a modulo-2 adder and CRC operator which modulo-2 adds said inherent bit pattern to said HEC byte, and carries out cyclic

redundancy check (CRC) operation to said HEC byte.

28. The system as set forth in claim 26, further comprising a plurality of reference channel detectors, each of said reference channel detectors being comprised of:

an input terminal through which an associated inherent bit pattern is input; and

a modulo-2 adder and CRC operator which modulo-2 adds said inherent bit pattern input through said input terminal, to said HEC byte, and carries out cyclic redundancy check operation to said HEC byte.

29. A system for identifying a channel, to be used in a time-division multiplexing transmission system in which a plurality of channels is time-division multiplexed for transmission,

characterized in that

at least one of said channels stores asynchronous transfer mode (ATM) cell-base flow therein,

a transmitter deforms a HEC byte into an inherent form to thereby produce a reference channel, said HEC byte being formed in a cell header of a channel storing said ATM cell-base flow, and being indicative of data used for detecting and correcting an error in transmitted data,

a receiver detects said reference channel signal including said HEC byte having been deformed into said inherent form.

30. The system as set forth in claim 29, wherein said transmitter modulo-2 adds an inherent bit pattern to said HEC byte.

31. The system as set forth in claim 30, wherein said recipient establishes synchronization with respect to a cell with said HEC byte to which said inherent bit pattern has been modulo-2 added, to thereby identify said reference channel.

32. The system as set forth in claim 29, wherein said recipient selects a channel, based on the detected reference channel.

33. The system as set forth in claim 32, wherein said transmitter modulo-2 adds an inherent bit pattern to said HEC byte.

34. The system as set forth in claim 33, wherein said recipient establishes synchronization with respect to a cell with said HEC byte to which said inherent bit pattern has been modulo-2 added, to thereby identify said reference channel, and alters said inherent bit pattern to thereby select a desired channel.

35. A method of identifying a channel, to be used in a time-division multiplexing transmission system in which a plurality of channels is time-division multiplexed for transmission,

at least one of said channels stores asynchronous transfer mode (ATM)

cell-base flow therein,

said method including:

the first step of deforming a HEC byte into an inherent form to thereby produce a reference channel, said HEC byte being formed in a cell header of a channel storing said ATM cell-base flow, and being indicative of data used for detecting and correcting an error in transmitted data, said first step being carried out by a transmitter;

the second step of time-division multiplexing channel signals including said reference signal, and producing a time-division multiplexed signal, said second step being carried out by said transmitter;

the third step of time-division separating said time-division multiplexed signal, said third step being carried out by a recipient; and

the fourth step of detecting a reference channel signal including said HEC byte, among a plurality of channel signals produced in said third step, said fourth step being carried out by said recipient.

36. The method as set forth in claim 35, wherein said first step includes the steps of:

synchronizing said channel signals with one another, based on said HEC byte; and

modulo-2 adding an inherent bit pattern to said HEC byte.

37. The method as set forth in claim 36, wherein said fourth step includes the steps of modulo-2 adding said inherent bit pattern to said HEC

byte, and carrying out cyclic redundancy check (CRC) operation.

38. A method of identifying a channel, to be used in a time-division multiplexing transmission system in which a plurality of channels is time-division multiplexed for transmission,

at least one of said channels stores asynchronous transfer mode (ATM) cell-base flow therein,

said method including:

the first step of deforming a HEC byte into an inherent form to thereby produce a reference channel, said HEC byte being formed in a cell header of a channel storing said ATM cell-base flow, and being indicative of data used for detecting and correcting an error in transmitted data, said first step being to be carried out by a transmitter; and

the second step of detecting said reference channel signal including said HEC byte having been deformed into said inherent form, said second step being to be carried out by a recipient.

39. The method as set forth in claim 38, wherein said first step includes the step of modulo-2 adding an inherent bit pattern to said HEC byte.

40. The method as set forth in claim 39, wherein said second step includes the step of establishing synchronization with respect to a cell with said HEC byte to which said inherent bit pattern has been modulo-2 added, to thereby identify said reference channel.

41. The method as set forth in claim 38, wherein said second step includes the step of selecting a channel, based on the detected reference channel.

42. The method as set forth in claim 41, wherein said first step includes the step of modulo-2 adding an inherent bit pattern to said HEC byte.

43. The method as set forth in claim 42, wherein said second step includes the steps of:

establishing synchronization with respect to a cell with said HEC byte to which said inherent bit pattern has been modulo-2 added, to thereby identify said reference channel; and

altering said inherent bit pattern to thereby select a desired channel.

44. A communication system in which a plurality of subscriber terminals are connected to a terminal station unit through the same communication medium, and an access control to an ascending line directing toward said terminal station unit from said subscriber terminals is carried out in time-division multiplexing access,

characterized in that

said ascending line has a frame having a fixed length,

said frame is divided into a plurality of ascending sub-frames, and

each of said ascending sub-frames is comprised of a time-slot having a

length inherent to each of said ascending sub-frames.

45. The communication system as set forth in claim 44, wherein said terminal station unit switches an apparatus for terminating an ascending signal, in every one of said ascending sub-frames.

46. The communication system as set forth in claim 44, wherein a time-slot located at a fixed position in said ascending sub-frame is assigned to each one of said subscriber terminals, and a synchronous transfer mode signal is stored in said time-slot in at least one of said ascending sub-frames.

47. The communication system as set forth in claim 46, wherein said time-slot has a length equal to a sum of a length of a signal transmitted by said synchronous transfer mode signal during one frame, and a length of a header associated with an ascending signal.

48. The communication system as set forth in claim 44, wherein a cell having a fixed length is stored into said time-slot in at least one of said ascending sub-frames.

49. The communication system as set forth in claim 44, wherein a packet having a variable length is stored into an area comprised of a plurality of time-slots connected to one another, in at least one of said

ascending sub-frames.

50. The communication system as set forth in claim 44, wherein a descending line directing to said subscriber terminals from said terminal station unit has an descending line frame having a length equal to a length of said frame of said ascending line,

said descending line has access control areas for each one of said ascending sub-frames wherein assignment of a time-slot in each of said ascending sub-frames to said subscriber terminals is written in said access control area, and

said access control area is inserted into a predetermined position in said descending line frame which position corresponds to a position in said ascending line frame in which a head of an ascending sub-frame is positioned.

51. The communication system as set forth in claim 50, wherein an area other than said access control area is divided into a plurality of descending sub-frames in said descending line frame, and an area in which a position of an boundary between said descending sub-frames is written is inserted into said descending line frame in a predetermined position.

52. The communication system as set forth in claim 50, wherein said access control area is inserted into different positions in said descending line frames to thereby have each of the ascending sub-frames had different

lengths from one another.

53. The communication system as set forth in claim 44, wherein a descending line directing to said subscriber terminals from said terminal station unit has a descending line frame having a length equal to a length of said frame of said ascending line, and

an ascending line control area is inserted into a predetermined position in said descending line frame,

said ascending line control area including an access control area in which assignment of a time-slot in each of said ascending sub-frames to said subscriber terminals is written, and an area in which a position of an boundary between said descending sub-frames in said ascending line is written.

54. The communication system as set forth in claim 53, wherein an area other than said ascending line control area is divided into a plurality of descending sub-frames in said descending line frame, and an area in which a position of an boundary between said descending sub-frames is written is inserted into said descending line frame in a predetermined position.

55. The communication system as set forth in claim 44, wherein a descending line directing to said subscriber terminals from said terminal station unit has a descending line frame having a length equal to a length of said frame of said ascending line,

said descending line frame has a sign rate equal to a sign rate of said ascending line multiplied by N wherein N is a positive integer,

said descending line is comprised of N channels each having a sign rate equal to a sign rate of said ascending line,

one of said N channels having a function of making access to said ascending line.